

Appl. No. : 10/780,780
Filed : February 18, 2004

IN THE CLAIMS:

1. (Currently Amended)

A mechanism for removably locking a sewer grate within its mounting frame, wherein the grate comprises a number of spaced parallel bars, and the mounting frame has a ledge structure and a downwardly extending side wall below the ledge structure: said locking mechanism comprising a nut retainer ~~means~~ affixed to the frame side wall, a threaded nut carried by said nut retainer ~~means~~, an apertured plate disposed above the nut but below the grate; an upstanding suspension structure carried by the plate and at least partially encircling at least one of the grate bars, whereby the plate is attached to the grate, and a bolt extendable downwardly through the apertured plate ~~aperture~~ into threaded engagement with the nut whereby the plate is removably attached to the frame via the nut and associated nut retainer.

2. (Original)

The locking mechanism of claim 1, wherein said bolt comprises a head having a cylindrical side surface, an end surface, and cavity extending from said end surface parallel to the cylindrical surface, said cavity comprising a plural number of internal wrench-turning flats, and an obstruction extending with the cavity space, whereby the bolt can be turned only by a wrench having external flats mated to the internal flats and depression mated to the obstruction.

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3. (Original)

The locking mechanism of claim 2, wherein said obstruction comprises a pin extending within the cavity on the bolt axis.

4. (Currently Amended)

The locking mechanism of claim 1, wherein said upstanding suspension structure comprises two channel elements spaced a distance corresponding to ~~a the~~ spacing between the grate parallel bars; said apertured plate being adapted to span ~~a the~~ space below two of the grate bars, said channel elements extending upwardly from said plate so that each channel element encircles one of the grate bars.

5. (Currently Amended)

The locking mechanism of claim 4, wherein ~~an the~~ aperture in said plate to which said bolt is connected is located midway between the two channel elements.

6. (Currently Amended)

The locking mechanism of claim 1, wherein said nut retainer ~~means~~ comprises an angle member having two leg elements extending right angularly relative to each other; one of said leg elements extending flatwise along the side wall of the frame; the other leg element extending parallel to the apertured plate.

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7. (Original)

The locking mechanism of claim 6 wherein said threaded nut is affixed to the lower surface of said other leg elements.

8. (Original)

The locking mechanism of claim 6, and further comprising means for orienting said angle member on the frame side wall; said orienting means comprising a first hole in said leg element, and a pin extending from the first hole into the mounting frame.

9. (Currently Amended)

The locking mechanism of claim 1, wherein said bolt passes through an the aperture in said plate, and wherein said aperture is elongated in a direction parallel to the plane of the grate bars, whereby the bolt can be aligned with the nut in spite of variations in grate bar location.

10. (Currently Amended)

A mechanism for removably locking a sewer grate within its mounting frame, comprising a nut retainer ~~means~~ affixed to the frame below the grate; a threaded nut carried by said nut retainer ~~means~~; a grate hold-down means extending downwardly through the grate; and a bolt having a head and threaded shank; said bolt having its head engaged with the hold down means and its threaded shank in threaded engagement with the nut.

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11. (Original)

The locking mechanism of claim 10, wherein said grate hold down means comprises an apertured plate and two inverted U-shaped channel members extending upwardly from said plate and encircling of two parallel grate bars.

12. (Currently Amended)

The locking mechanism of claim 10, wherein said nut retainer ~~means~~ comprises an angle member having two right angularly-related leg elements; one of said leg elements being affixed to the mounting frame; the other leg element extending away from the mounting frame in close proximity to the undersurface of the grate.

13. (Original)

The locking mechanism of claim 12, and further comprising means for orienting said angle member on the frame; said orienting means comprising a first hole in the frame, a second hole in said one leg element, and a pin extending from the first hole into the second hole.

14.-19. (Canceled)